

DSIT Monthly Summary

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Management

This month, members of the ARM Data and Science Integration met with NASA EOSDIS Core System Staff to begin exploring technical areas where cross program collaboration can occur. Four steps were discussed to begin ARM and EOSDIS cooperation.

- 1) Add a DOE/ARM advertisement to the EOS Earth Pages
- 2) Collaborate on the development of a comprehensive ARM data model
- 3) Provide for a consolidated view of ARM/EOS data to users
- 4) Explore integration of the EOS Java Enabled Search Tool to enhance our data management

Future meetings are planned at our External Data Center, Experiment Center, and the Archive to continue our collaboration.

On November 8, the Scientific Information Systems Group (SISG) at BNL held an Open House to celebrate the opening of the ARM External Data Center. The Open House served as an occasion to demonstrate to BNL and State University of New York at Stony Brook environmental scientists (the work that SISG is carrying out in support of ARM.)

A TeleVideo conference was conducted to continue our progress toward the Shortwave data quality metrics and summary product, data stream tracking and the overall ARM data model.

Science Related

AEROSOL WORKSHOP- The Second Aerosol Workshop was held on November 13-14, 1996 in Oak Ridge. Meng-Dawn Cheng hosted the workshop. The objectives of the workshop were to make recommendations to the ARM Program on

- improvement of existing aerosol-related measurements,
- additional measurements and their priority,
- requirements for infrastructure support, and
- possible field campaigns and Intensive Observation Periods (IOPs). A total of about 30 participants attended the workshop. A summary will be posted on the web soon via the ARM Homepage under Research / Science Team Working Groups. Recommendations on standard aerosol measurements and an aerosol IOP plan are included, along with extended abstracts of presentations by the participants.

FUTURE WORKSHOPS- Two important ARM workshops are scheduled for January 1997. The first is the Single-Column Model (SCM) Workshop to be held January 8-9 in Livermore. Presentations will be made on ARM SCM and related studies, with particular focus on the use of ARM data. Discussion sessions will address the status and future needs of water vapor, cloud, and surface flux data products. Presentations will also be given by site scientist teams from the three sites. The second is the Instantaneous Radiative Flux (IRF) Workshop to be held January 22-24 in Maryland. The first half day will be devoted to a review of initial results from the recently completed Water Vapor IOP. A working group for that IOP will be meeting on January 21 to discuss progress to date on analysis of the data. The rest of the workshop will cover longwave and shortwave issues related to ARM, including the treatment of clouds in the line-by-line radiative transfer model, shortwave radiometry and cloud/shortwave radiation interactions.

VALUE ADDED PROCEDURE HOMEPAGE- The release of the Value Added Procedure homepage was accomplished this month. It was added to the ARM homepage under "Research" This page provides a general background on Value Added Procedures, and then provides more detailed explanations about most of the VAPs that are currently in production in the Experiment Center. Examples of the netCDF files, as well as images of the data are also available for each VAP.

RAMAN LIDAR DATA RELEASED TO WATER VAPOR IOP PARTICIPANTS- The CART raman lidar data was released to the water vapor IOP participants for beta review. This data included the water vapor mixing ratio data, as well as aerosol scattering ratio and depolarization profiles. Also, new data quality fields were added to indicate the maximum height to use these data (in other words, the height at where the signal approaches the background level). Time-height cross section plots, as well as plots of coincident radiosonde and raman lidar profiles, were made available with this dataset.

AERI RETRIVAL- A logic error in the AERI retrieval Value Added Procedure was identified and removed. This error manifested itself only when the micropulse lidar reported that its lens was obscured at the beginning of the day before a successful retrieval could be performed. In over 6 months of running in the Experiment Center this situation occurred on only two days.

Peter Minnett liaised with SeaSpace and Papua New Guinea Weather Service on the subject of the HRPT satellite receiving station to be installed at Port Moresby to cover the TWP area. The hardware is now built and undergoing testing at San Diego. The PNG NWS has identified two possible sites for the antenna assembly. One is on the roof and the other is at ground level. The equipment will be air-freighted to arrive at Port Moresby on January 17, 1997, for installation January 20-23. On-site training of PNG NWS personnel will follow immediately. It is anticipated that routine data reception will be initiated before the end of January 1997.

Data System Related

TWP- The infrastructure have received the first batch of data tapes from ARCS 1, Manus Island. The data is being inspected by the site science team and the TWP data managers. A brief review of the data indicates that the first collections on Manus Island were a success. A more detailed analysis of data completeness and quality is ongoing. TWP data processing involves converting the data on the tapes to engineering units as necessary, performing quality checks and then a scientific analysis by the site scientist team that results in a released data package.

ARM Archive- The file transfer and data reception processing for the Archive was modified to run on a new Sun Ultrasparc System (sitexfer.archive.arm.gov). This change separates the data reception and file retrieval data flows at the Archive. Having these data flows on two separate systems improves the operational robustness of the Archive. It also simplifies maintenance and development planning, because these processes have very different tolerances for changes and interruptions. These modifications were supported by staff from BNL and PNNL as site transfer software and network configurations were also updated. The file retrieval processes are expected to be changed to the new system within the next month.

SGP- BNL has established a documentation area for the SGP Site Operations Log. It contains

- an overview of the site ops log process, a data dictionary,
- a description of the baseline for making entries into the SOL
- the distribution list for specific requested reports of entries from the SOL
- and a description of the proposed www-based entry application which will replace the 4gl entry application now being used. The URL is; <http://arm3.das.bnl.gov/sisg/soldoc.html>

NSA Site Data Systems- SHEBA ARCS integration continues to make progress. At the end of November, adamlite was collecting data from the following list of platforms: gndrad (Ground Radiometers), skyrad (Sky Radiometers), vceil (Vaisala Ceilometer), mwr (Microwave Radiometer), mmcr (Millimeter Cloud Radar), and the gps (Global Positioning System). In addition, data was ingested for gndrad, skyrad, vceil, and mwr. Integration netcdf data files can be downloaded from <http://dmf.arm.gov>.

External Data Center

PIF/CAR/DQR- BNL has Developed a www-based agenda for the PRB to use in an effort to minimize time spent on locating the PIFs, CARs, etc. that are on each week's agenda. The www-based agenda has direct links to the PIF/CAR/DQR database for the specific items on the agenda. The minutes of each meeting have also been put on the web for easy access. The URL is <http://arm1.das.bnl.gov/pifcar/PRB>

More details on the status and statistics for the BNL work is available from <http://arm3.das.bnl.gov/sisg/arm.html>

Archive - Data Stats

Archive- Data Transmitted Statistics

Transmitted to General Scientific Community -- November 1996 - 9,289 files and 3,287 MB (137 requests)

Transmitted to ARM Infrastructure -- November 1996 - 149 files and 27 MB (4 requests)

Other Statistics

Stored volume- As of November 30, 1996 - 1,397,253 files (749 Gigabytes)

Added during November 1996 - 62,223 files added (50,265 MB)